



ANNUAL DRINKING WATER QUALITY REPORT

2017 SUMMARY

Dear City Water Customers,

The Mayor's Office is pleased to present to you The City of Frederick's Annual Drinking Water Quality Report. We developed this report to provide information to our customers about the source and quality of City drinking water. This annual consumer confidence report (CCR) is a regulatory requirement, and it is intended to inform our customers how our City drinking water compares with the regulatory standards set by the Federal Safe Drinking Water Act. (SDWA)

Water Quality is always a topic of interest, especially in today's world. Please be assured that The City of Frederick takes pride in striving to produce the highest quality drinking water for you, our residents and businesses. The employees of the City's water division work around the clock to ensure the quality of services that our consumers have come to expect. It is their job to provide the skilled operations, maintenance, and laboratory analysis required to produce clean and dependable tap water for all of our customers. We hold ourselves to the highest standard because that is what we believe our customers deserve.

The tables that follow summarize information for the most recent calendar year of drinking water monitoring. The drinking water provided by The City of Frederick during the past year has again met all of the Environmental Protection Agency (EPA) and State of Maryland health standards for drinking water contaminants. There were no contaminant level violations.



**Mayor's Office
The City of Frederick
Frederick, MD**

**Public Water System
ID # MD0100015**

TESTING REQUIREMENTS

The State of Maryland and the EPA require water suppliers to perform contaminant testing on their drinking waters and to report the results on a regular basis. These regulatory requirements are based upon the current federal *Safe Drinking Water Act* (SDWA) and are designed to ensure the quality of your drinking water. This annual summary is prepared after the end of each calendar year to keep our consumers informed. Once updated, the report gets posted to the City website for viewing, and public notices of availability are made no later than June 30 of each year.

ABOUT THE DATA

Most of the test data shown in the tables is from samples collected during 2017, but some contaminants are not monitored for every year. Data not from 2017 will be noted as such. Although plant production information is provided, the test data in this report is a compilation of all City water sources. Many other contaminants have been tested for but not detected, including organic chemicals such as industrial solvents and pesticides, inorganics, such as metals, and radioactive compounds like radon. Space does not permit listing all of them here. Please call the number listed under the City contacts section for technical information if you have questions relating to The City of Frederick's drinking water monitoring program.

CONTAMINANT INFORMATION

Although there were detections of some contaminants in City water, all of those found were at safe levels. All drinking water sources are subject to potential contamination by substances that occur naturally or are manmade. As water travels over the surface of land or through the ground, some of these substances can be picked up and transported with the water. These can be microbes, organic or inorganic chemicals, or radioactive substances. All drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information can be obtained from the Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791), or at the EPA website www.epa.gov/safewater

PRECAUTIONS FOR VULNERABLE POPULATIONS

The City of Frederick reminds those who may have weakened immune systems that any drinking water (tap or bottled) should not be considered sterile. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy, those who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from microbial infections. These people should seek advice about drinking water from their healthcare providers. Guidelines developed by the EPA and Centers for Disease Control (CDC) on ways to lessen the risk of infection from microbial contaminants like Cryptosporidium are available by calling the Safe Drinking Water Hotline at (800-426-4791) or visiting www.epa.gov/safewater

GENERAL INFORMATION ABOUT LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from service lines and home piping that contains lead components. The City of Frederick is responsible for providing high quality drinking water, but cannot control the variety of materials used in all plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. City water meets all current lead contamination standards, but if you are concerned about lead in your tap water, you may want to have your water tested. More information on lead in drinking water is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at the EPA website www.epa.gov/safewater/lead.

SOURCE WATER ASSESSMENTS

The Maryland Department of Environment (MDE) has completed source water assessments on the vulnerability of all State water sources to contamination. Contaminants of concern for City sources include disinfection byproducts precursors, sediment, herbicides, and coliform bacteria. For more information about or copies of the full assessment reports, you may call the Maryland Department of Environment - Source Protection Division at 410-537-3714 or the technical information number listed under the City contacts section.

CITY WATER SOURCES

During 2017 The City of Frederick utilized four different water sources to supply our service area. During the past year, you may have received treated water from any one of these sources or a mixture of them, depending upon your location within our service area. The average daily production from all sources was approximately **5.98 million gallons per day**. The percentage of drinking water supplied by each of these four sources was as follows:



49% came from the **Linganore Creek Source**



20% came from the **Monocacy River Source**



16% came from the **Fishing Creek Source**



15% came from the **Potomac River Source**

DEFINITIONS OF ABBREVIATIONS AND TERMS USED IN THIS REPORT

In the data tables, you will see terminology and acronyms with which you may not be familiar. To help you understand this information, please note the following definitions:

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety. These goals represent a target level for a contaminant that is not necessarily achievable with current standard treatment technologies

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water, based on present regulations as set by the EPA. To protect the public health, MCLs are set as close to the MCLGs as feasible, based on the best treatment technology currently available

AL - Action Level - The concentration of a contaminant, which, if exceeded, triggers special treatment or other requirements to be followed. Action levels function as a type of MCL.

LRAA - Locational Running Annual Average - Applies to disinfection byproducts. Quarterly test results from each sample location are used to calculate a running annual average for compliance monitoring at each representative sample site.

TT - Treatment Technique - A required process intended to reduce the level of a specific contaminant in drinking water

NTU - Nephelometric Turbidity Unit - A measure of the cloudiness or clarity of the water

PPM - Parts Per Million - Unit of measure meaning one part contaminant in one million parts water (equivalent to milligrams per liter)

PPB - Parts Per Billion - Unit of measure meaning one part contaminant in one billion parts water (equivalent to micrograms per liter)

PPT - Parts Per Trillion - Measurement unit meaning one part contaminant in one trillion parts water (equivalent to nanograms per liter)

REGULATED CONTAMINANTS — CITY WATER PLANTS — 2017

2017 CCR—PWSID # MD0100015				DATA FROM ALL TREATED WATER SOURCES		
CONTAMINANT	UNITS	MCLG	MCL	REPORT RESULT ¹	RANGE ²	VIOLATION
FLUORIDE	PPM	4	4	0.80	0.52 – 0.80	No
NITRATE	PPM	10	10	2.11	0 – 2.11	No
BARIUM	PPM	2	2	0.03	0 – 0.03	No
ETHYLENE DIBROMIDE	PPT	0	50	10	0 – 10	No
ATRAZINE	PPB	3	3	0.31	0 – 0.31	No
SIMIZINE	PPB	4	4	0.19	0 – 0.19	No
TURBIDITY (TT) MAXIMUM	NTU	0.00	1.00	0.39	0.02 – 0.39	No
TURBIDITY (TT) VALUES >0.3 NTU	%	0	5	0.9	NA	No
TOTAL ORGANIC CARBON (TT)	%	NA	NA	Met % Removal Requirements	NA	No

1. Result column shows the reportable value as defined by EPA guidance which can be either a maximum or an average value.
2. Range shows the highest and lowest reported test values when more than one sample was tested during the calendar year.
3. NA in table means not applicable to that contaminant.

REGULATED CONTAMINANTS—CITY DISTRIBUTION SYSTEM—2017

CONTAMINANT	UNITS	MCLG	MCL	REPORT RESULT	RANGE	VIOLATION
COLIFORM BACTERIA	%	0	5	0	NA	No
CHLORINE (MRDL)	PPM	4	4	1.2	1.1 – 1.2	No
TOTAL TRIHALOMETHANES (THM) ¹	PPB	NA	80	64	18 – 123	No
TOTAL HALOACETIC ACIDS (HAA) ¹	PPB	NA	60	58	19 – 86	No
COPPER ² (AL)	PPB	1300	1300	116	4.4 – 180	No
LEAD ² (AL)	PPB	0	15	1.21	0 – 3.3	No

1. Result Values for THM and HAA are the highest Locational Running Annual Averages (LRAA) calculated by MDE for the reporting period.
2. Tests for Lead and Copper were last made during 2015, and are scheduled to be performed again during summer of 2018. Result values for lead and copper represent the 90th percentile value out of a total of 30 high risk sites tested.

REGULATED CONTAMINANTS INFORMATION

CONTAMINANT	TYPICAL SOURCE OF CONTAMINANT
BARIUM	Erosion of natural barium deposits
CHLORINE	Disinfectant additive which controls growth of microbes in water
FLUORIDE	Additive which promotes strong teeth and reduces incidence of cavities
NITRATE	Runoff from fertilizer use; discharges from sewage treatment plants; leachate from septic systems; natural deposits
LEAD	Corrosion of plumbing systems that have lead components
COPPER	Corrosion of plumbing systems that have copper components.
ETHYLENE DIBROMIDE	Runoff following the use of this pesticide
SIMIZINE	Runoff following the use of this herbicide
ATRAZINE	Runoff following the use of this herbicide
TURBIDITY	Runoff of soil and other particles; Turbidity measurements are used to gauge the effectiveness of our water filtration systems
TOTAL TRIHALOMETHANES (THM)	By-products of drinking water chlorination. Includes bromoform, bromodichloromethane, chlorodibromomethane, chloroform
TOTAL HALOACETIC ACIDS (HAA)	By-products of drinking water chlorination. Includes mono and dichloro- aceticacid, mono and dibromoaceticacid, trichloroaceticacid
TOTAL ORGANIC CARBON (TOC)	Natural and manmade sources. Reducing TOC levels prior to addition of disinfectants helps lower the formation of disinfection byproducts.

UNREGULATED CONTAMINANTS OF GENERAL CUSTOMER INTEREST

CONTAMINANT	UNITS	MCL	REPORT LEVEL	RANGE	VIOLATION	TYPICAL SOURCE
HARDNESS¹	PPM	None	101	24 – 176	No	Natural Deposits
SODIUM	PPM	None	19.5	1.6 – 19.5	No	Natural Deposits
SULFATE	PPM	None	58.3	0 – 58.3	No	Natural Deposits

1. Hardness value shown is an annual average value. Divide the value shown by 17 to get the approximate value in grains per gallon.

OTHER UNREGULATED CONTAMINANTS — CITY UNTREATED SOURCE WATER — 2017

CONTAMINANT	UNITS	MCL	REPORT LEVEL	RANGE	VIOLATION	TYPICAL SOURCE
CRYPTOSPORIDIUM¹	Oocysts/L	None	0.09	0—0.09	No	Farmland Runoff

1. This special occurrence testing for the unregulated microbe **Cryptosporidium** was started in October 2015 and ended in October of 2017. The level detected in our raw water was very low, and our filtration processes are effective at removing Cryptosporidium, so there is minimal risk for the presence of this pathogen in finished City tap water. EPA is evaluating the need for more Crypto testing in the future.



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FREDERICK, MD

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PWSID NO.—MD0100015

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PUBLIC INVOLVEMENT OPPORTUNITIES

The public is encouraged and invited to participate and provide input on drinking water issues.

Mayor and Board of Aldermen Public Meetings are held at City Hall every 1st & 3rd Thursday of each month at 7:00 p.m.

CITY CONTACTS

To request a paper copy of this report or general information, call 301-600-1681.

For technical information on contaminant testing or results, call 301-600-1473.

For information on our water treatment plants or processes, call 301-600-1186.



THIS REPORT CAN BE VIEWED AND PRINTED ONLINE AT:
www.cityoffrederick.com/ccr

Un mensaje para nuestros clientes de habla español:
Este informe contiene información importante sobre su agua potable. Favor busque a alguien que pueda traducirlo para usted o explicar su contenido, ya que es algo muy importante.

